Appendix: Methodology

To analyze these data, we use R v.4.0 installed on a windows server 2016 based VPS hosted by French provider OVH. The analysis method was the following: The first step of characterization was to identify popular tweets and the influencers: are they alone, in a group… and their position in the graph of messages distribution: are they first creator or first retweeter influencers. Then we looked at each influencer profile to check if their account existed on other platforms and to get data about their popularity and activity (followers, number of messages).

We follow the process below:
- Gathering data (tweets with the hashtag Confinement): we used the dataset publicly available on a github repository https://benaventc.github.io/BarometreConfinement/. Our source code in the R language is also available on this repository.
- Extracting properties of a popular tweet (popularity of a tweet is measured by its number of retweets). Several factors can influence the popularity of a tweet: its content (the information transmitted) with the container (how the information is transmitted), the context (essentially the context related to the news, twitter being widely used to comment or create the news) and the user who wrote the tweet (due to its credibility or influence).
- Building the network between popular users with the "followers" link. This is done with the software R calling the twitter API and the visualization is done with Gephi.
- Analyzing the retweet behaviour by extracting the first retweeters of popular tweets and highlighting some patterns

To detect influencers, we first select tweets that have been retweeted more than 500 times. Then we move to authors of these tweets. We finally select authors that have at least posted more than 10 times such tweets. We end up with 2 categories of influencers, the ones that posted more than 10 times and the ones that posted more than 20 times.

We also looked at "retweeters" and define 3 categories:

- more than 20 times in the top 10% of the first retweeter of a message
- more than 10 times in the top 10% of the first retweeter of a message
- more than 5 times in the top 10% of the first retweeter of a message

In order to analyze an influencer we looked at the following data (Forestier et al., 2012):

- the number of friends (followers and followed),
- the common interests with the other community members (based on user-profile)
- the quality of the content in the user profile,
- the activity inside a user-profile (number of tweets, days and time of posting)

Finally, to analyze the top retweeted messages we looked at

- variety of elements in the message (text, #, emoticons, images, videos, links)
- technics used in image or video
- semiology and intended sense related to the content of the image or video

All the scripts may be found at

https://benaventc.github.io/BarometreConfinement/